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(19)

(11) Publication number: **59063668 A**

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**PATENT ABSTRACTS OF JAPAN**(21) Application number: **57173936**(51) Intl. Cl.: **H01M 6/36 H01M 10/39**(22) Application date: **05.10.82**

(30) Priority:

(43) Date of application  
publication: **11.04.84**(84) Designated contracting  
states:(71) Applicant: **ASAHI CHEM IND CO LTD**(72) Inventor: **SAOTOME ISAO  
ARAKAWA TATSUMI  
FUKUOKA MASAYUKI**

(74) Representative:

**(54) THERMAL  
ACTIVATING BATTERY**

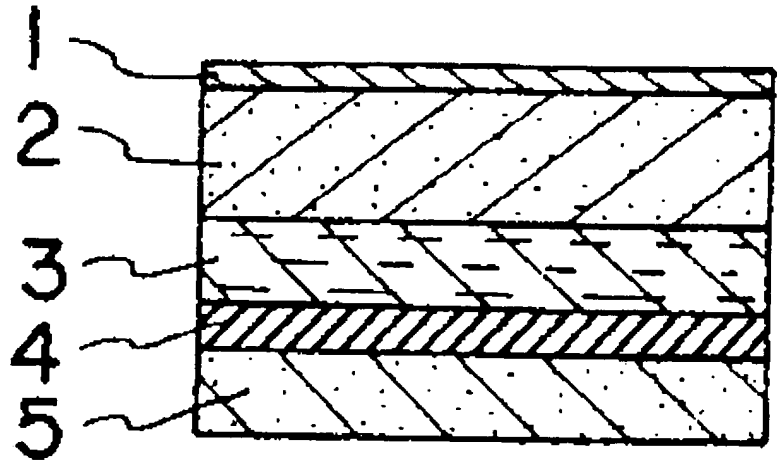
(57) Abstract:

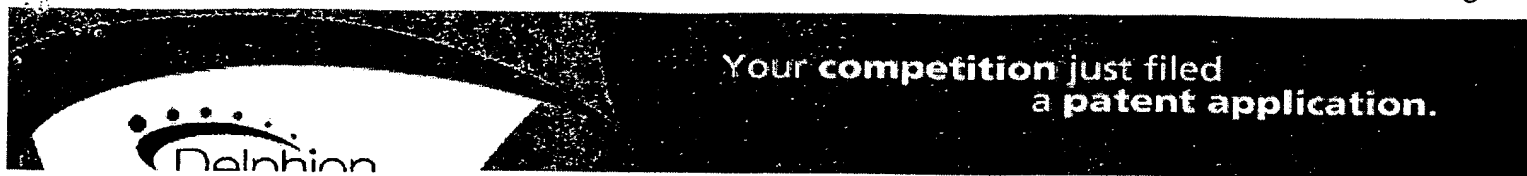
**PURPOSE:** To provide a battery which outputs no power during storage and outputs power by heating by separating at least either one of a cathode active material, electrolyte, and an anode active material in a battery with a spacer such as paraffine.

**CONSTITUTION:** Nickel is used as a current collector 1, and paraffine having a melting point of 60~62°C is used as a spacer 4 which separates a negative active material 5 from electrolyte 3. Zinc plate is used as the negative active material 5. A positive mix 2 consists of acetylene black, manganese dioxide, and ammonium chloride. Electrolyte consists of ammonium chloride and zinc chloride mixed solution. Thickness of paraffine is 0.5mm or less. This battery outputs no current and voltage at room temperature. When the battery is placed in the air at 80°C for 30sec, it produces current and voltage and after 2 seconds, the battery outputs a power of 1.5V,

100mA/cm<sup>2</sup>.

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Title: **JP59063668A2: THERMAL ACTIVATING BATTERY**

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Country: **JP Japan**  
Kind: **A**

Inventor(s): **SAOTOME ISAO**  
**ARAKAWA TATSUMI**  
**FUKUOKA MASAYUKI**

Applicant/Assignee:  
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Issued/Filed Dates: **April 11, 1984 / Oct. 5, 1982**

Application Number: **JP1982000173936**

IPC Class: **H01M 6/36; H01M 10/39;**

Priority Number(s): **Oct. 5, 1982 JP1982000173936**

Abstract:

**Purpose:** To provide a battery which outputs no power during storage and outputs power by heating by separating at least either one of a cathode active material, electrolyte, and an anode active material in a battery with a spacer such as paraffine.

**Constitution:** Nickel is used as a current collector 1, and paraffine having a melting point of 60~62°C is used as a spacer 4 which separates a negative active material 5 from electrolyte 3. Zinc plate is used as the negative active material 5. A positive mix 2 consists of acetylene black, manganese dioxide, and ammonium chloride. Electrolyte consists of ammonium chloride and zinc chloride mixed solution. Thickness of paraffine is 0.5mm or less. This battery outputs no current and voltage at room temperature. When the battery is placed in the air at 80°C for 30sec, it produces current and voltage and after 2 seconds, the battery outputs a power of 1.5V, 100mA/cm<sup>2</sup>.

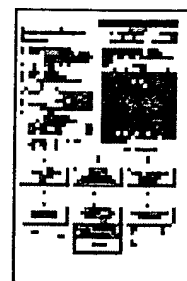
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